Los Alamos
NATIONAL LABORATORY

memorandum

Environment Safety and Health Division

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Symbol:	ESH-DO-99:137
Date:	July 2, 1999

Subject: Request for Proposals for ESH Division Technology Development, Evaluation and Application Studies.

Since FY 1995, ESH Division has had a program to fund LANL ES&H related technology development, evaluation and application (TDEA) projects that meet specific requirements. A steering committee has responsibility for reviewing, evaluating, and prioritizing all proposals which are submitted.

Attached is a Request for Proposals for FY 2000 funding. Proposals must be e-mailed to the division office by COB August 27, 1999. Please send electronic copy to max@lanl.gov. Proposals received after the due date will not be considered.

Proposals previously funded by this program in FY 1999 must be resubmitted to request continued funding during FY 2000. The new proposals must indicate progress during FY 1999. The purpose and justification for continuance, the benefit relative to ESH responsibilities at LANL, and benefit relative to ESH responsibilities at LANL, and benefit to program responsibilities.

During FY 1999 $500K funding was available. We hope to match this funding level in FY 2000. As you would expect any final decision regarding funding is dependent on the funds available to ES&H Division during FY 2000.

It is critical that each proposal show the benefits which will accrue to ESH Division and the Laboratory. This is a prime consideration when evaluating proposals. At the same time, increased emphasis will be placed on partnering, dollar savings, and potential for future funding from other sources. Proposals should address these considerations as appropriate.

Please distribute the attached information to individuals in your organization who might be interested. Feel free to contact members of the Steering Committee for additional information. Their names are listed in the attachments. To provide some indication of what proposals hav been successful, the last attachment lists all proposals funded in FY 1999. Some of these may be candidates for continuation into FY 2000 (but a new proposal is required).

In the past many proposals did not adequately indicate the benefits which will reslut from the study. This represents a major consiseration, espcecially in light of th tight budget situation. It is to the PI's advantage to address this question as directly and quantitatively as possible. We need to articulate this benefit as clearly as possible.

We will try to put extra copies of this Request for Proposals on the ESH division home page. Proposals will need classification review at the group level.

WH:mv

Attached: a/s

TDEA investigators:

Richard. Olsher, ESH-4, G761
Shawna Eisele, ESH-4, G761
Christopher Bjork, ESH-4, G761
Larry Hoffman, ESH-10, K542
William Martinez, ESH-4, D444
Gerry Wood, ESH-5, K486
Richard Kissane, ESH-5, K494
Bill Inkret, ESH-12, E546
Mario Schillaci, ESH-12, E546
Thomas Buhl, ESH-4, G761
Guthrie Miller, ESH-12, E546
Deward Efurd, CST-11, J514
Joseph Wermer, ESA-TSE
Jeff Whicker, ESH-4, G761
Elizabeth Foltyn, NMT-9, E502
Hsiao-Hua Hsu, ESH-4, G761
David Wannigman, ESH-1, E503
John Rodgers, ESH-4, G761
Hongrui Gong, ESH-4, G761
Richard Olsher, ESH-4, G761
Bruce Reinert, ESH-5, K553
Ron Scripsick, ESH-5, K553
Murray Moore, ESH-4, G761
Ricky Lopez, ESH-5, K553
Gerry Wood, ESH-5, K483
Piotre Wasiolek, ESH-4, G761
Jay Spore, TSA-10, K575
James Biggs, ESH-20, M887
Randy Balice, ESH-20, M887
Katherine Bennett, ESH-20, M887
Leslie Hansen, ESH-20, M887
Terry Foxx, ESH-20, M887
John Huchton, ESH-20, M887
Phil Fresquez, ESH-20, M887
Steven Koch, ESH-20, M887
Dave Volz, ESH-10, K542
Mike Larranaga, ESH-10, K542
Cindy Blackwell, ESH-IEP,K491
Denny Erickson, ESH-DO, K491
John Fox, ESH-DO , K491
Al Garcia, ESH-OIO, C303
Doris Garvey, ESH-EIS, M889
Joe Graf, RPO, K483
Nancy Greene, ESH-DO, K491
Aleene Jenkins, ESH-DO, K491
Charlotte Lindsey, ESH-IMPT, K491
Lee McAtee, ESH-DO, K491
Eric McNamara, ESH-DO, K491
Carl Ostenak, ESH-SRPT, C303
Harry Otway, ESH-DO, K491
Wayne Hansen, ESH-DO, K491
Charles Robertson, Loyola Salazar,OIO, C303
Melissa Robinson, ESH-DO, K491
Gerry Schlapper, Bill Somers, ESH-1, K487
Paul Hoover, ESH-1, E503
Jerry Williams, Judy Gosling, Hugh Smith, ESH-2, D421
David Seidel, ESH-3, K483
Dennis Vasilik, Ken Alvar, ESH-4, G761
Barbara Hargis, Brad Gallimore, ESH-5, K486
Tom McLaughlin, ESH-6, F691
Rick Brake, ESH-7, K999
Bill Flor, ESH-10,K542
Tony Andrade, ESH-12, K483
Meg Cox, ESH-13, J596
Gary Cort, Spencer Hill, ESH-14, P949
Doug Stavert, ESH-17, J978
Steve Rae, ESH-18, K497
Jim White, Aden Jackson, ESH-19, K498
Dianna Webb, John Huchton, ESH-20, M887

TDEA Committee Members:

Kenneth Alvar, ESH-4, G761
Thomas Buhl, ESH-4, G761
Bruce Erdal, EM/TD, J591
Philip Fresquez, ESH-20, M887
Elizabeth Foltyn, NMT-9, E502
Wayne Hansen, ESH-DO, K491
Larry Hoffman, ESH-10, G732
Bruce Reinert, ESH-5, K553
David Lee, ESH-12, K483

Request for FY 2000 Proposals
July 1998
LANL-ESH Division Technology Development, Evaluation & Application (TDEA) Studies

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ESH Division initiated a program in FY 1995 to fund LANL-ESH related Technology Development Evaluation and Application (TDEA) projects. Such efforts must be closely related to LANLES&H requirements and needs. This is an excellent opportunity for LANL technical staff to become involved with the LANL ESH programs by partnering with ES&H Division staff.

For FY 00. The program will focus on:

1. Dosimetry
2. Hazards Protection
3. Instrumentation
4. Monitoring
5. Neutron Measurements

Other topics with strongly compelling justifications or immediate significant impact will also be considered.

Attachment #1 lists all TDEA Committee members, who will be available to answer any questions which may arise.

Attachment #2 lists LANL ESH Division Priority Technical Areas of Interest for FY 2000 based on input from ESH groups, and review by the committee. This is intended as a guide to proposal preparers. If necessary, further clarification can be obtained from any member of the committee.

Attachment #3 is the Evaluation Criteria for proposals. It notes criteria and weighting factors to be used by the committee when reviewing proposals. These criteria should help Principal Investigators (PIs) better focus their effort. Because of the funding source, it is mandatory that the proposed work be applicable to LANL-ES&H problems (near term and longer term).

Attachment #4 outlines a standard format for proposals. The principal investigator should make sure that the proposal addresses the items noted and is clearly applicable to LANL ES&H problems. The overall rating of the Proposals will be based on the criteria and weighting factors noted in Attachment #3 and the technical/scientific quality of the proposed project.

Attachment #5 is the TDEA Steering Committee Charter for ESH Division and is provided as additional information regarding the planned efforts of this committee.

Attachment #6 is a list of TDEA projects funded in FY 1998.

Ten hard copies of each proposal should be submitted no later than COB Friday, August 27, 1999 to Maxine Valdez, ESH-DO, K491, or e-mail to max@lanl.gov.

The committee hopes to have its funding recommendations completed by early October so that PI's know their status early in FY 2000. This may be modified by budget uncertainties.

During FY 2000 we expect that ~$500K will be funded through this committee. Any final funding decisions will be controlled by funding levels for ESH-Division. While funding is for a single year, each proposal should indicate funding for the duration of the project, which may be multi-year. We expect TDEA to be a continuing program. Proposals may be funded for up to 3 years. Funds requested for continuing work beyond that period must have an exceptionally strong justification. Such funding would be an unusual exception to the 3-year limit.

Proposals funded by this program in FY 1999 must be resubmitted to request continued FY 2000 funding. The new proposal must indicate progress in FY 1999 funding. The new proposal must indicate progress in FY 1999 and the purpose and justification for continuance. In light of tight budgets, it is critical that benefit to ESH-Division and the Laboratory be clearly defined.

TDEA projects can also provide an opportunity to develop techniques and information that may be used as a foundation for studies to be submitted for DOE or reimbursable funding, or collaboration with other internal (LANL) or external (universities) organizations.

All PIs will be required to submit bi-monthly reports on progress in a standard format, which is provided at the start of the project. The reports should be concise, informative but not onerous.

ATTACHMENT 1

TDEA Committee Members

Name	Affiliation	Phone	Mail Stop	FAX	
Kenneth Alvar	ESH-4	5-8084	G761	5-6071	alvar@lanl.gov
Thomas Buhl	ESH-4	5-8176	G761	5-6071	tbuhl@lanl.gov
Bruce Erdal	EM/TD	7-5338	J591	5-8118	erdal@lanl.gov
Philip Fresquez	ESH-20	7-0815	M887	7-0731	fresquez@lanl.gov
Elizabeth Foltyn	NMT-9	5-0162	E502	5-4775	foltyn@lanl.gov
Wayne Hansen	ESH-DO	7-4218	K491	5-3811	hansen_wayne_r@lanl.gov
Larry Hoffman	ESH-10	665-8890	K542	5-4477	hoff@lanl.gov
David Lee	ESH-12	667-8085	K483	78085	lee_david_w@lanl.gov
Bruce Reinert	ESH-5	7-5775	K553	5-3689	reinert@lanl.gov

ATTACHMENT 2

Priority Technical Areas of Interest for FY 2000

Priority technical areas were determined from information originally submitted by ESH Groups for the FY 95 funding year and modified each succeeding year. The areas identified are broad categories that encompass the subjects and projects to be submitted.

For FY98:
1. Dosimetry
2. Hazards Protection
3. Instrumentation
4. Monitoring
5. Neutron Measurements.

Monitoring, for example, may include vital sign monitoring in stressful work situations, methods or techniques for monitoring individuals or equipment for contamination, and environmental monitoring. Worker public and environmental are all included in "monitoring". Hazards protection encompasses advances in personal protective equipment or related equipment for radiological or non-radiological hazards. The instrumentation area may include development, evaluation or improvement of instruments and instrument systems such as personnel monitoring instrument systems, workplace monitoring instruments, or instrumentation designed for environmental measurements. Dosimetry may include radiation biology, new internal dosimetry methods and procedures, and external dosimetry methods. Dosimetry also includes epidemiological studies of LANL workers. Neutron measurements should be associated with dosimetry measurements.

Other topics with strongly compelling justifications or immediate significant impact will also be considered.

ATTACHMENT 3

Evaluation Criteria for ESH Division TDEA Proposals

25 points

1. The proposed work should address a problem that is an institutional (Laboratory-wide) problem critical to ES&H programs. The proposal should explain the nature of the impacts if the work is successful. The proposal should address how the work helps the Laboratory better meet the University of California contract performance measure. Program specific problems (unique problems at one facility) should be addressed by programmatic support.

25 points

2. The work should be an excellent ES&H technical problem. The proposal should provide in innovative approach to an ES&H problem that would make a significant improvement in dealing with the technical problem.

25 points

3. What are the success metrics or indicators? The proposal should address the funding amount required, technical approach, quality and experience of the team, schedule for the work, and the time to implementation.

15 points

4. Potential savings of manpower or other resources by solution of the problem must be addressed. The estimate should be provided in terms of dollars per year based on our current practice versus the proposed solution. In other words, what is the return on investment.

10 points

5. Is another source of funding contributing to solution of the problem? Is the joint funding from a private collaborator, other technical program at LANL, or another agency? Is the joint partner contributing analysis, beam time, facilities, or other resources but no dollars?

The lead investigator must be a member of ESH Division.

ATTACHMENT 4

FORMAT FOR PROPOSALS

July 1999

Only proposals that follow the format noted will be evaluated.

Title Page (One Page)

- Title
- Name of Principal Investigator(s), co-investigators, and group(s)
- Collaborating Organizations (if any)
- Requested Budget (by year; indicate if funding required for future years)
- Date of Submission
- Indicate if new or continuing proposal

Written Portion of Proposal (six pages maximum for items 1-6). Submit proposals with numbering that corresponds with the below criteria.

1. Problem Identification
A clear, succinct description of problem to be addressed.

2. Benefit
A description of the benefit to the LANL ES&H Programs and laboratory programmatic objectives as a result of the completion of the proposed project. This must include either benefit related to the environment, worker/public health and safety, or improved operation. An estimate in $ (dollars) saved or resource requirements reduced through direct cost savings and/or improved efficiencies and/ or improved health and safety is important. In some instances the benefit may be in terms of improved ESH provided; new regulations satisfied; or support for more efficiency meeting technical objectives of programs. Some indication of near and/or long term benefits to LANL must be provided.

3. Background and Objective(s)
A discussion of the relevant background of the proposed project which would be sufficient for the reviewers understanding of the proposed work. The objective(s) of the proposed project should be clearly stated at the end of this section.

4. Work Plan
The work plan should include a discussion of the approach, budget, schedule, and applicability to the regulatory agencies. For continuing projects, progress-to-date, referenced to original expectations, is required.

5. Deliverable(s)
A concise discussion of what the proposed project will deliver, what is necessary to implement the deliverable and when it will be ready for implementation. This discussion is typically closely tied to the discussion of benefit (#2).

6. Schedule (one page maximum)
The schedule should be in a Gantt Chart type of format showing activities, durations and milestones (including deliverables).

7. Budget (one page maximum)

The budget would reflect the major elements of the projects, which will correspond to the activities on the schedule. Separately indicate Operating, Capital, FTEs. At this time it is not clear that any capital equipment funds will be available, so the TDEA program cannot fund projects where access to capital funding is an absolute requirement. Indicate any other funding sources (i.e. matching funds by a line organization).

8. ES&H Evaluation

The proposals should briefly indicate that potential ES&H concerns associated with performing the study have been evaluated, and note what action (if any) is required to assume that the proposed study will be conducted in a manner that protects employees, contractors, the public and the environment from the harmful effects of any anticipated hazards.

This discussion should be consistent with the Laboratories Integrated Safety Management (ISM) program. This evaluation must show that appropriate work planning and hazard analysis is performed before that work begins, and that established safety procedures will be followed meticulously.

This must show that the Laboratory 5-Step approach will be followed:

- Plan the work
- Analyze the hazard
- Develop and implement hazard controls
- Perform the work safely
- Identify improvements to enhance safety

Proposals that do not have adequate ES&H evaluation will <u>not</u> be funded.

9. Bi-Monthly Reports

Bi-monthly reports must be submitted for review to the Committee. A committee point of contact will discuss with the PI the level of detail for such reports, will review the reports, and will identify any problems they see regarding progress or schedules. The committee will provide a bi-monthly report template for all projects.

ATTACHMENT 5

**Charter of the
Technology Development Evaluation and Application
Studies Steering Committee for
ESH Division
July 1998**

Background

The Los Alamos National Laboratory (LANL) ESH Division has responsibility for protecting the health of LANL workers and the public. This represents a major continuing effort, which results in expenditures of over $60 Million dollars/year. Initial emphasis of this program is on improved health and safety and/or improvements in efficiency and/or improved resource utilization. Because of the magnitude and associated cost of the total ES&H effort, the LANL ESH Division initiated a program to find applied studies to address special needs/problems. To satisfy LANL requirements all projects must be directly supportive of the LANL ES&H programs.

The potential benefit from a highly focused program of this type is to address ES&H problems in a cost-effective manner.

Steering Committee-Scope of Activities

The steering committee for LANL ESH Division Technology Development, Evaluation and Application (TDEA) Studies will be responsible for encouraging development of proposals from ESH Division staff, which are aimed at helping to solve some of the LANL ES&H program requirements. A representative of ESH-DO will chair this Committee. The steering committee will be responsible for:

1. Obtaining information from the LANL ES&H programs to identify priority interests;
2. Synthesizing this information into a convenient format and transmitting this information (soliciting proposals) to potential principal investigators;
3. Identifying a schedule and standard format for submissions of proposals for possible funding by the LANL-TDEA program;
4. Developing criteria that will be used to: a)review each proposal's technical merit, and b)estimate the time scale for application to solving ES&H problems at LANL;
5. Reviewing all submitted proposals for: a)relevance to LANL ES&H programs; b)technical quality; c)probability for success; d)time scale for application at LANL; and e)appropriateness of the budget;
6. Recommending funding;
7. Developing a mechanism for informing the principal investigator for each proposal of the results of the Steering Committee's evaluation of their proposal;
8. Documenting the complete review and approval process;

Attachment 3 represents the criteria, which will be used by the steering committee when evaluating proposals. This listing may be expanded by committee on the basis of additional information developed and/or policies adopted by LANL, DOE, OSHA, EPA, NMED, etc. Attachment 4 is the format to be used for all proposals.

Program Monitoring and Reports

As distinct from many technology efforts, this program must (because of the funding source) be focused on LANL ES&H program requirements and relatively short-term solutions to specific LANL problems. Monthly reports must be submitted for review to the committee, who will discuss with the PI an appropriate format and level of detail for such reports, and will identify any problems they see regarding progress or schedules. It is the responsibility of the Committee to alert PI's to situations, which may result in funding changes. Funding may be discontinued if progress is no compatible with LANL ES&H program requirements or priorities or funding limitations.

Funding Outlook

The magnitude and complexity of the tasks facing the LANL ES&H program, and the initial support from ESH-DO indicates that funding should be available in future years. This is contingent on budget constraints.

ATTACHMENT #6

TDEA investigators:

Richard. Olsher, ESH-4, G761
Shawna Eisele, ESH-4, G761
Christopher Bjork, ESH-4, G761
Larry Hoffman, ESH-10, K542
William Martinez, ESH-4, D444
Gerry Wood, ESH-5, K486
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Fred Bolton, ESH-10, K542
Dave Volz, ESH-10, K542
Mike Larranaga, ESH-10, K542

TDEA Committee Members:

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Elizabeth Foltyn, NMT-9, E502
Wayne Hansen, ESH-DO, K491
Larry Hoffman, ESH-10, G732
Bruce Reinert, ESH-5, K553

Summary of FY99
TDEA Proposals Submittals

	Title	PI	Co-Investigators	Collaborating Orgs	FY99
99-2	Pressure Effects and Deformation of Waste Containers	M. Larranaga, ESH-5 D. Volz, ESH-10			24.6K
99-3	Detection and Internal Dosimetry of Insoluble Metal Tritides	W. Inkret, ESH-12 M. Schillaci, ESH-12	G. Miller Y. S. Cheng		28.6K
99-5	A Wildfire Behavior Model for the Los Alamos Region and an Evaluation of Options for Mitigating Fire Hazards	R. Balice, ESH-20 S. Koch, ESH-20	P. Valerio, ESH-20 S. Loftin, ESH-20 J. Baars, ESH-17	USDA Forest Service Rocky Mnt. Research Station Bandelier National Monument	93.5K
99-10	Service Life Modeling for Using LANL Organic Vapor Air-Purifying Respirator Cartridges and Setting Change-Out Schedules	G. Wood, ESH-5		ESH-5 Eng/Respiratory Protection Team	45K
99-12	Proton Recoil Scintillator Los Alamos Neutron Dose-Meter	R. Olsher, ESH-4	S. Eisele, ESH-4 C. Bjork, ESH-4 D.Seagraves, ESH-4 W. Martinez ESH-4		25K
99-16	Implication of Room Ventilation and Containment Design for Minimization of worker Exposure to Plutonium Aerosols	J. Whicker, ESH-4	J. Rodgers, ESH-4 H. Gong, Consultant M. Moore, ESH-4 R. Lopez, ESH-5 L. Parietti, ESA-DE P. Wasiolek, ESH-4		82K
99-17	Determining and Monitoring the Inhalable Fraction of Plutonium Aerosols in an Accident	J. Rodgers, ESH-4	P. Wasiolek, ESH-4 M. Moore, ESH-4 W. Inkret, ESH-12 H. Gong, ESH-4		52.5K
99-18	An XRF Continuous Air Monitor for Metal Tritide Aerosols in the Workplace	John Rodgers, ESH-4	P. Wasiolek, ESH-4 D. Olsher, ESH-4 Yung Sung Cheng, LLRI		56.1K
99-19	Development of Methods for Determining Physicochemical Properties of Respirable Beryllium Aerosol Materials Associated with Chronic Beryllium Disease	R. Scripsick, ESH-5	Kendall J. Hollis, MST-6	ESH-5, MST-6, Brush Wellman, Inc. Lovelace Respiratory Research Institute	88K
99-20	Rapid Discrimination of Personnel Contamination Due to Radon Versus Other Alpha-Emitting Radionuclides	J. Voss, ESH-1	R. Rasmussen, ESH-1	ESH-1, SAIC, Quandrad Sensors	22.2K